

**DECLARATION OF ANUPAM B. JENA, MD, PHD**

I, Anupam B. Jena, MD, PhD, declare the following:

1. I am the Ruth L. Newhouse Associate Professor of Health Care Policy and Medicine at Harvard Medical School and a physician in the Department of Medicine at Massachusetts General Hospital. I previously submitted an expert report in this matter dated May 10, 2019.<sup>1</sup> In that expert report, I calculated Rite Aid Mid-Atlantic's share of morphine milligram equivalents ("MMEs") distributed into Cuyahoga and Summit Counties from 2006 to 2014 to be [REDACTED] percent.<sup>2</sup> I have been asked by counsel for Rite Aid Mid-Atlantic to update this calculation based on the statute of limitations period in this matter: from April 25, 2014 to April 25, 2018.

2. Based on data included in the ARCOS Data Files<sup>3</sup> and publicly available ARCOS Retail Drug Summary Reports, 2015-2017, Rite Aid Mid-Atlantic's share of opioids (as reported in morphine milligram equivalents or "MMEs") distributed into Cuyahoga and Summit Counties from April 25, 2014 to April 25, 2018 is [REDACTED] percent.<sup>4</sup>

3. Specifically, the number of MMEs distributed into Cuyahoga and Summit Counties from April 25, 2014 to December 31, 2014 is calculated using the ARCOS Data Files. This analysis is limited to where the "BUYER\_COUNTY" field equals "CUYAHOGA" or "SUMMIT," the "TRANSACTION\_CODE" field equals "S", and where the buyer is a dispenser based on the buyer

---

<sup>1</sup> Expert Report of Dr. Anupam B. Jena, MD, PhD, May 10, 2019 (hereafter, "Jena Report").

<sup>2</sup> Jena Report, Exhibit 14.

<sup>3</sup> See Jena Report, footnote 15.

<sup>4</sup> This share calculation excludes all codeine products. Including all codeine products increases Rite Aid Mid-Atlantic's share of opioids (in MMEs) distributed into Cuyahoga and Summit Counties during this time period marginally to [REDACTED] percent. Although codeine can be schedule II depending on the dosage, Rite Aid Mid-Atlantic did not distribute any schedule II codeine. Rite Aid Mid-Atlantic distributed small amounts of schedule III codeine, which are beyond the scope of this litigation. However, since the ARCOS Retail Drug Summary Reports do not distinguish between schedule II and non-schedule II codeine, I cannot separately identify and include schedule II codeine in the calculation. As such, I calculate Rite Aid Mid-Atlantic's share with and without codeine. See ECF No. 693 at 3 ("Accordingly, the Special Master RULES as follows. Defendants shall produce discovery related to all opioid products that are or ever were classified as Schedule II under the Controlled Substances Act.").

business activity (“BUYER\_BUS\_ACT”) field (e.g., pharmacies, practitioners, and hospitals/clinics). This analysis excludes buprenorphine and methadone.

4. Specifically, the number of MMEs distributed into Cuyahoga and Summit Counties from January 1, 2015 to December 31, 2017 is calculated using the ARCOS Retail Drug Summary Reports, which are aggregated by 3-digit zip code and drug. This analysis uses the 3-digit zip codes 441 for Cuyahoga County and 443 for Summit County. In addition, this analysis applies the MME conversion factor for the fentanyl patch to all grams of fentanyl from 2015-2017; patch was the most common form of fentanyl in Cuyahoga and Summit Counties in 2014 and it has the lowest conversion factor of fentanyl products. This analysis excludes buprenorphine and methadone.

5. Specifically, the number of MMEs distributed from January 1, 2018 to April 25, 2018 is estimated using the daily average number of MMEs into Cuyahoga and Summit Counties (using the 3-digit zip codes 441 and 443, respectively) in 2017 (excluding buprenorphine and methadone) multiplied by the number days from January 1, 2018 to April 25, 2018.

6. I further attest that, based on my review of the publicly available ARCOS data, this method of calculation likely represents an upper bound of Rite Aid Mid-Atlantic’s share of opioids distributed into Cuyahoga and Summit Counties over these time periods, since the estimated total number of MMEs distributed into Cuyahoga and Summit Counties is likely understated. This is true for at least two reasons. First, the analysis uses the lowest MME conversion factor (for fentanyl patches) for all fentanyl products. Second, the analysis only uses the 3-digit zip code 443 to calculate opioid distribution into Summit County, even though a portion of the 3-digit zip code 442 also extends into Summit County.

I declare under penalty of perjury under the laws of the United States of America that the foregoing information is true and correct.

Executed on June 28, 2019, at Boston, Massachusetts.

  
\_\_\_\_\_  
ANUPAM B. JENA, MD, PHD